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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,236	08/22/2006	Michel Paul Barbara Van Bruggen	NL 040244	1546

24737 7590 05/14/2008

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

SCHINDLER, TRENT L

ART UNIT

PAPER NUMBER

2879

MAIL DATE

DELIVERY MODE

05/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/598,236

**Applicant(s)**

VAN BRUGGEN ET AL.

**Examiner**

TRENT SCHINDLER

**Art Unit**

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## Detailed Action

### Status of the claims

1. Applicant has amended claims 1, 6, 9, and 10, necessitating new grounds for rejection. Claims 11-19 have been added. Claims 1-19 are pending.
2. Examiner withdraws previous rejection of claims 6, 9, and 10 under 35 U.S.C. §112.

### Rejections under 35 U.S.C. §102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 11, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Scott (US 2002/0171363 A1).
5. Regarding claim 1, Scott discloses a process of manufacturing a high-intensity discharge lamp comprising an elongate ceramic discharge vessel (Fig. 4) surrounded by an outer envelope (Fig. 1) and having a wall which encloses a discharge space containing an inert gas, such as xenon, and an ionizable filling (para. 20), wherein at both ends in said discharge space an electrode is arranged (Fig. 4), between which electrodes a discharge arc can be maintained along a discharge path, characterized in that, in order to improve light transmission of the discharge vessel, said process comprises the step of placing the discharge vessel in contact with a suspension of inorganic particles and allowing the suspension to enter pores in said wall, thus completely coating the surface of said wall (para. 36).
6. Regarding claim 3, Scott discloses the process of claim 1, and further discloses the coated discharge vessel being subsequently sintered (para. 36).

Art Unit: 2879

7. Regarding claim 11, Scott discloses the process of claim 1, and further discloses the suspension consisting of an inorganic material dispersed in a liquid medium (para. 36).
8. Regarding claim 14, Scott discloses the process according to claim 11, wherein the inorganic particles are non-conductive (para. 36).
9. Regarding claim 16, Scott discloses a process of manufacturing comprising: providing an elongate ceramic discharge vessel having a wall including pores (para. 25); mixing a suspension consisting of non-conductive inorganic particles dispersed in a liquid medium (para. 36); filling the pores with the suspension to form a coating (para. 36); and sintering the elongate ceramic discharge vessel to form the coating into an integral fused part of the wall (para. 36).

### Rejections under 35 U.S.C. §103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott in view of Weiss (5,336,969).
12. Scott discloses the device of claim 1, but does not disclose the suspension being applied in a dipping or spraying operation.
13. However, in the same field of endeavor, Weiss teaches applying a suspension to the surface of a discharge vessel by dipping or spraying, since it is a conventional method for applying suspensions (col. 3, lines 52-55).

Art Unit: 2879

14. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the teaching of Weiss in the device of Scott, since this is a conventional method for applying suspensions.

15. Regarding claims 4 and 5, Scott discloses the process of claim 3, but does not disclose the coating sintering temperature disclosed by the applicant, or the coating being made of  $\text{Al}_2\text{O}_3$  with the grain size specified by the Applicant.

16. However, Weiss teaches a suspension comprised of  $\text{Al}_2\text{O}_3$  in order to provide UV absorption, with a grain size of less than 300 mesh, that is sintered (col. 2 line 20, col. 3, line 49). Weiss is silent regarding the sintering temperature of the coating.

17. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the coating of Weiss, since this would provide UV absorption. It would further have been obvious to a person of ordinary skill in the art at the time the invention was made to use an average grain size in the range specified by the Applicant, since a 300 mesh is merely an upper limit on the grain size, and the technique of milling taught in the reference would produce a significant fraction of the grains within this size range.

18. Although Weiss is silent regarding the specific temperature used to sinter the coating, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the temperature range specified by the applicant, since determine the optimum range of a result-effective variable through routine experimentation has been held to be within the level of ordinary skill in the art.

19. Regarding claims 12 and 13, Scott discloses the process of claim 11, and further discloses the discharge vessel made of  $\text{Al}_2\text{O}_3$ , but does not disclose the inorganic material dispersed in the liquid medium being the same material.

20. However, in the same field of endeavor, Weiss teaches a suspension comprised of  $\text{Al}_2\text{O}_3$  in order to provide UV absorption (col. 1, line 62).

Art Unit: 2879

21. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the coating of Weiss in the device of Scott, since this would provide UV absorption.

22. Claims 6, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott.

23. Regarding claim 6, Scott discloses an elongate ceramic discharge vessel surrounded by an outer envelope and having a wall which encloses a discharge space containing an inert gas, such as xenon, and an ionizable filling wherein at both ends in said discharge space an electrode is arranged, between which electrodes a discharge arc can be maintained along a discharge path (Fig. 4), and further discloses that a coating of inorganic particles is made an integral fused part of the ceramic wall of the discharge vessel (para. 36) but does not disclose a particular porosity of the finished wall.

24. However, Scott recognizes that reduced porosity in ceramic discharge lamps is generally desirable in order to improve the transmission of light, and the teaching of Scott is directed towards reducing porosity of the device (abstract).

25. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the porosity specified by the applicant, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller 105 USPQ 233 (CCPA 1955).

26. Similarly, regarding claim 7, Scott as applied to claim 6 discloses the device of claim 6, but does not disclose ranges of total, total forward, and real in-line transmission.

27. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the ranges of transmissions specified by the applicant, since it is generally desirable in such devices to improve light transmission, and it has further been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller 105 USPQ 233 (CCPA 1955).

Art Unit: 2879

28. Regarding claim 15, Scott as applied to claim 6 discloses the device of claim 6, and further discloses the inorganic particles being non-conductive (the glass frit of para. 36)

29. Regarding claim 8, Scott as applied to claim 6 discloses the device of claim 6, but does not disclose the lamp mounted in a lamp assembly for projection purposes.

30. However, a person of ordinary skill in the art at the time the invention was made would know that a principal use for high-intensity discharge lamps is projection, and that a lamp assembly would generally be necessary for such a use. It would therefore have been obvious to a person of ordinary skill in the art at the time the invention was made to mount the lamp in a lamp assembly for projection purposes.

31. Similarly, regarding claim 9, Scott as applied to claim 6 discloses the device of claim 6, but does not disclose the lamp mounted in a vehicle headlight.

32. However, a person of ordinary skill in the art at the time the invention was made would know that a principal use for high-intensity discharge lamps is in vehicle headlights. It would therefore have been obvious to a person of ordinary skill in the art at the time the invention was made to mount the lamp in a vehicle headlight.

33. Similarly, regarding claim 10, Scott as applied to claim 6 discloses the device of claim 6, but does not disclose the lamp mounted in a beamer multimedia projector.

34. However, a person of ordinary skill in the art at the time the invention was made would know that a principal use for high-intensity discharge lamps is in multimedia projectors. It would therefore have been obvious to a person of ordinary skill in the art at the time the invention was made to mount the lamp in a beamer multimedia projector.

35. Regarding claims 17 and 18, Scott discloses the process of claim 16, and further discloses the elongate ceramic discharge vessel made of  $\text{Al}_2\text{O}_3$  (para. 23) but does not disclose the elongate ceramic discharge vessel and the non-conductive inorganic particles made of the same material.

Art Unit: 2879

36. However, in the same field of endeavor, Weiss teaches a suspension of inorganic particles comprised of  $Al_2O_3$  in order to provide UV absorption (col. 1, line 62).

37. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the inorganic particles of  $Al_2O_3$ , since this would provide UV absorption.

38. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott in view of Scott et al. (US 6,498,433 B1, hereinafter '433). Scott discloses the process of claim 16, but does not disclose the non-conductive inorganic particles being made of a material selected from the applicants group.

39. However, in the same field of endeavor, '433 teaches the use of  $Y_2O_3$  as the non-conductive inorganic particles (col. 4, line 2, col. 5, line 38), in order to reduce diffusion of the fill gas through the vessel walls.

40. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the teaching of '433 in the process of Scott, since this would reduce diffusion of the fill gas through the vessel walls.

## Response to arguments

41. Applicant's arguments with respect to claims 1-5 and 8-10 have been considered but are moot in view of the new ground(s) of rejection.

42. Regarding claims 6 and 7, Applicant argues that Scott fails to disclose the integral fused part having a pore-filling effect, or a particular value of porosity. However, the process of Scott includes melting the coating. It would be clear to a person of ordinary skill in the art that the melted coating would fill the pores of the vessel. Further, as stated in the first office action, it is well-known that low porosity is beneficial in HID vessels to improve translucency. Thus it is generally desirable to make the value of the porosity as small as possible, and it would be obvious to a person of ordinary skill to have a value of porosity less than that specified by the Applicant.



## Conclusion

43. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

44. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRENT SCHINDLER whose telephone number is (571)270-3321. The examiner can normally be reached on Monday through Thursday, 7:30 am to 5:00 pm ET.

46. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

47. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2879

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